

CLAIMS

1. (currently amended) A furan polymer impregnated wood which is obtained by impregnating wood impregnated with a polymerizable furfuryl alcohol monomer mixture comprising containing at least water, furfuryl alcohol, a stabilizer selected from water-soluble lignin derivatives, and combinations thereof, and an initiator, characterized by the use of a wherein the stabilizer further is selected from the group consisting of sodium carbonate, sodium bicarbonate, sodium citrate, phosphates and water-soluble lignin derivatives such as calcium and ammonium salts of lignosulfonic acids, and an further wherein the initiator is selected from the group consisting of maleic anhydride, phthalic anhydride, maleic acid, malic acid, phthalic acid, benzoic acid, malonic acid, ascorbic acid, boric acid, citric acid, zinc chloride, aluminum chloride, other cyclic organic anhydrides and acids, and combinations thereof.
2. (original) A furan polymer impregnated wood of claim 1, characterized in that pH of said furfuryl alcohol mixture is from 2.5 to 4.0.
3. (currently amended) A method for preparing a furan polymer impregnated wood which is obtained by comprising impregnating a piece of wood impregnated with a polymerizable furfuryl alcohol monomer mixture containing at least comprising water, furfuryl alcohol, a stabilizer and an initiator, wherein the stabilizer is selected from the group consisting of water-soluble lignin derivatives, and combinations thereof, and an initiator, characterized by the use of a stabilizer further selected from sodium carbonate, sodium bicarbonate, sodium citrate, phosphates and water-soluble lignin derivatives such as calcium and ammonium salts of lignosulfonic acids, and an initiator selected from maleic anhydride, phthalic anhydride, maleic acid, malic acid, phthalic acid, benzoic acid, malonic acid, ascorbic acid, boric acid, citric acid, zinc chloride, aluminum chloride, other cyclic organic anhydrides and acids, and combinations thereof, followed by a curing step.
4. (currently amended) The method of claim 3, characterized in that said curing is performed by maintaining at approximately room temperature for some days or weeks.
5. (original) The method of claim 3, characterized in that said curing is performed by use of a temperature in the range of from about 70°C to about 140°C.

6. (original) The method of claim 3, characterized in that said curing requires conventional kiln drying using the normal temperature schedules for drying untreated, green lumber of the same size and species as the impregnated material, with temperatures at the beginning of curing about 45°C and at the end about 90°C, with a final post-curing step between 100°C to 140°C for material with maximum hardness and dryness.
7. (currently amended) The method of claim 3, characterized in that said curing and drying ~~can be accomplished~~ are performed using high-temperature kiln schedules in the 80°C to 120°C temperature range with a ~~possible~~ final post-curing step between 120°C to 140°C for material with maximum hardness and dryness.
8. (currently amended) The method of claim 3, characterized in that curing is performed by submerging the treated material in hot oil, ~~preferably in the temperature range of from~~ 80°C to 120°C, with the temperature either fixed or starting lower in the range and increasing as curing and drying proceeds.
9. (cancelled)
10. (new) A furan polymer impregnated wood according to claim 1, wherein the water – soluble lignin derivatives are either calcium or ammonium salts of lignosulfonic acids.
11. (new) A furan polymer impregnated wood according to claim 1, wherein the stabilizer is selected from the group consisting of sodium carbonate, sodium bicarbonate, sodium citrate and phosphates.
12. (new) A method according to claim 3, wherein the water –soluble lignin derivatives are either calcium or ammonium salts of lignosulfonic acids.
13. (new) A method according to claim 3, wherein the stabilizer is selected from the group consisting of sodium carbonate, sodium bicarbonate, sodium citrate and phosphates.